AMENDMENTS TO THE CLAIMS

Listing of the claims:

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

1. (Currently Amended) A solid state image pickup device comprising:

a semiconductor substrate defining a two-dimensional surface;

a number of photoelectric conversion elements disposed in a light receiving area of said semiconductor substrate in a matrix shape and in a ~~plurality~~ first number of rows and a second number of columns;

analog digital converters ~~signal processors~~, each formed for each column of said photoelectric conversion elements in an area of said semiconductor substrate other than the light receiving area, said analog digital converters ~~signal processor at least~~ converting analog image data from said photoelectric conversion elements into digital image data; and

a non-volatile memory formed ~~in correspondence with respective photoelectric conversion elements~~ in an area of said semiconductor substrate other than the light receiving area at a succeeding stage of said analog digital converters ~~signal processor~~, said non-volatile memory having memory units, each corresponding to one of the photoelectric conversion elements, and recording the digital image data.

2. (Currently Amended) A solid state image pickup device according to claim 1, wherein said non-volatile memory records ~~record~~ the digital image data of one frame.

3. (Currently Amended) A solid state image pickup device according to claim 1, wherein said non-volatile memory records ~~record~~ the digital image data of a plurality of frames.

4. (Currently Amended) A solid state image pickup device according to claim 1, further comprising erasing means for erasing the digital image data after the digital image data stored in said non-volatile memory is read to an external device.

5. (Currently Amended) A solid state image pickup device according to any one of claims 1-4, wherein addresses of said non-volatile memory in a vertical direction are ~~is~~ related to addresses of the light receiving area in the vertical direction.

6. (Original) A solid state image pickup device according to claim 1, further comprising a data register used in common for both data input and output for said non-volatile memory.

7. (Original) A solid state image pickup device according to claim 1, wherein said non-volatile memory has a depth of same bits as output bits of said signal processor provided for each column.

8. (Original) A solid state image pickup device according to claim 1, wherein each of said signal processors outputs the digital image data of one row of said photoelectric conversion elements in parallel, and said non-volatile memory records the

digital image data of one row output parallel at a memory position corresponding to a row direction.

9. (Original) A solid state image pickup device according to claim 1, wherein said non-volatile memory is a NAND type transistor memory.

10. (Original) A solid state image pickup device according to claim 1, wherein said non-volatile memory is a NOR type transistor memory.

11. (Original) A solid state image pickup device according to claim 9, wherein the transistor memory has a floating gate type transistor memory structure.

12. (Original) A solid state image pickup device according to claim 9, wherein the transistor memory has a MONOS type transistor memory structure.

13. (Original) A solid state image pickup device according to claim 9, wherein the transistor memory is a ferroelectric memory.

14. (Original) A solid state image pickup device according to claim 1, further comprising a CCD for reading charges from said photoelectric conversion elements in the light receiving area and transfers analog image data to said signal processor provided for each column.

15. (Currently Amended) A solid state image pickup device according to ~~any one of~~ claim 1, further comprising a MOS circuit for reading charges from said photoelectric conversion elements in the light receiving area and transfers analog image data to said signal processor provided for each column, and wiring lines.

16. (Original) A solid state image pickup device according to claim 1, further comprising: a shutter control unit; and

an optical system, and

wherein said solid state image pickup device works as a digital camera.

17. (New) A solid state image pickup device according to claim 1, wherein positions of said photoelectric conversion elements are identified by horizontal position and vertical position, and said non-volatile memory units are identified by two dimensional addresses (x, y), x and y corresponding, respectively, to the horizontal and vertical positions of the photoelectric conversion element.

18. (New) A solid state image pickup device according to claim 17, further comprising:

horizontal address decoder which decodes horizontal address of both the photoelectric conversion elements and the non-volatile memory units.

19. (New) A solid state image pickup device according to claim 18, further comprising:

vertical address decoder including a scan circuit which increments the vertical address;

wherein the vertical address decoder selects one of the photoelectric conversion elements rows, to send analog image data thereof to the analog-digital converters, and send converted digital image data to corresponding non-volatile memory units.